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Conference Abstract

Silcone-Based Solvents and Emulsions for Cleaning Natural Science Specimens: Case Studies from the Otago Museum and Museums Victoria.

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Abstract

Developed by the cosmetics industry, silicone-based solvents such as Cyclomethicone D4 and D5 and emulsifiers Velevsil Plus and KSG 350Z have found useful applications in museum conservation after being pioneered by Richard Wolbers to safety clean acrylic paint films. These products' unique properties are also applicable for cleaning of natural science specimens. Silicone solvents are volatile and will completely evaporate away from surfaces. They have very low polarity and cannot not solubilise fats or oils, such as natural preen oils found in feathers. Low viscosity gives them the ability to flood a porous surface, such as bone, protecting it from absorbing chemicals and soiling during cleaning. Velevsil Plus and KSG 350Z provide the desirable ability to form an emulsion with water, and or solvents in a silicone based solvent carrier, allowing for the strictly controlled application of water or solvent solutions to the surface of a specimen.

This poster will present case studies from the Otago Museum (Dunedin, New Zealand) and Museums Victoria (Melbourne, Australia) investigating the use of these products in cleaning natural science specimens. The experiments include the removal of an aged wax

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and shellac coating from a Moa (*Dinonris sp.*) skeleton, the removal of acrylic coatings on extremely moisture sensitive pyritized fossils, and the cleaning of soiled feathers and fur.

Issues around sourcing and shipping these specialised products to Australasia will also be discussed. The successful application of paintings conservation techniques to scientific specimens demonstrates the benefits of collaboration between specialisations in conservation for developing new techniques for caring for our collections.

Keywords

Conservation, silicone solvents, new techniques

Presenting author

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